

A08906

C.F. II
Birds, Life Histories
Ducks, Shorebirds

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University of Wisconsin, Madison

THE HOMING OF TRANSPLANTED YOUNG WOOD DUCKS¹

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Reprinted from THE WILSON BULLETIN, Vol. 59, No. 2, June, 1947, pp. 104-109

¹ Journal Paper No. 11, University of Wisconsin Arboretum.

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BY ROBERT A. MCCABE

MANY areas in Wisconsin that were once the breeding grounds for Wood Ducks (*Aix sponsa*) have for the past several decades contained no breeding birds of the species. Lake Wingra and vicinity, including part of the northern city limits of Madison, was one of these areas. The last known breeding of Wood Ducks in the vicinity was in 1890, when Dr. S. H. Chase of Madison, saw a brood in the "middle spring" (Wingra Springs, Figure 1) on the south shore of the lake. Other ornithologists, namely Cahn (.915), Schorger (1929), and Anderson *et al.* (1942), working in the same locality, failed to find Wood Ducks breeding. Spring and fall migrants are not uncommon; especially noticeable are the spring arrivals when they frequent the south shore. It appears, however, that for over 50 years no Wood Ducks have bred in the Lake Wingra area.

There is a record, by J. H. Alexander, of several pairs nesting on an oak-grown island in Mud Lake eight miles southeast of Lake

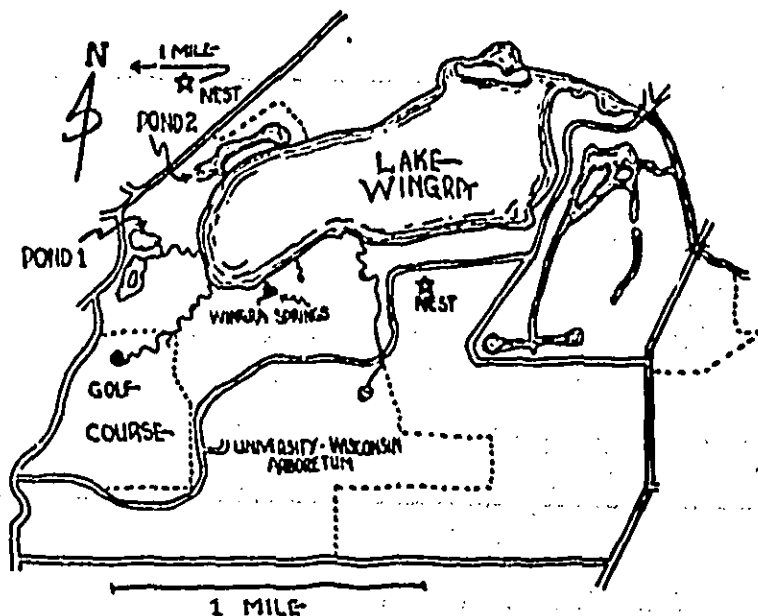


Figure 1. Lake Wingra and vicinity. Arrows indicate points at which Wood Ducks were released.

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Wingra. One of the birds observed was a female with a small brood, seen in 1915. Wood Ducks were also seen occasionally in this area by the same observer during the two decades that followed.

The University of Wisconsin Arboretum is a thousand-acre tract on the south side of Lake Wingra. On the Arboretum a series of ponds have been dug to augment the breeding grounds and refuge area for waterfowl and to add beauty to the natural springs that furnish water for the ponds. Pond 1 (Figure 1) has been the breeding area for a flock of about 100 semi-wild Mallards (*Anas platyrhynchos*) during the past 10 years. These Mallards build their nests along the walks and in the shrub beds that surround the ponds. They are very tolerant of people, noise, and activity, and the nests, if reasonably well hidden, are usually successful.

An experiment to establish a Wood Duck colony in the area was begun in 1943 with the cooperation of Frank C. Bellrose and Arthur S. Hawkins of the Illinois Natural History Survey. Two attempts (made in 1943 and 1944) to hatch Wood Duck eggs shipped by rail were unsuccessful. On August 4, 1944, the Survey sent us 100 ducklings (49 males and 51 females), all between three and five weeks of age, which had been hatched at Havana, Illinois, 200 miles from Madison. These were kept in captivity at Madison, and all but three survived.

On August 14, 25 of the largest birds (then about seven weeks old) were given red celluloid bands and released at Pond 2 (Figure 1) on the west shore of Lake Wingra. They had been banded with Fish and Wildlife Service bands before leaving Illinois. All the ducks took wing, some flying short distances, others making long flights along the shore of the lake. On August 15, 25 more birds (banded yellow) were released as follows: A large pen was placed in the shallow water of Pond 2 and the ducks placed in it. They were kept there about five hours, during which time the vicinity was kept cleared of people and dogs and the pen-door opener remained out of sight. A pull string opened the door gradually, allowing the birds to swim out undisturbed. By 3:00 p.m. the door was completely open, but the ducks did not leave until 3:40, and then they flew as soon as they were clear of the pen.

On August 18, 10 birds, and on August 22, 15 birds were liberated, all banded blue. The crates were opened under a fallen cottonwood in a thicket of red osier dogwood at Wingra Springs on the south shore of the lake (Figure 1). This inhibited flying, and all but one duck (which flew) walked the 10 yards to the spring creek and swam out into the lake. The remaining 22 birds were banded green and released September 3 on the north edge of Pond 2.

Most of the birds (the first 50 and the last 22) were released at Pond 2 because it is large, close to the lake, and less frequented by people. But within three days after the first release, most of the birds

were seen in Pond 1, apparently decoyed there by the resident semi-wild Mallards. The last release went immediately to Pond 1, and no Wood Ducks were seen on Pond 2 after August 30. Birds from all the releases were observed at Pond 1, and many of them became very tame. A few remained for the winter, apparently influenced by the wintering Mallards, but most of the Wood Ducks had left by November 3.

During the two and a half months of their stay in the Lake Wingra area, 17 counts were made at the regular loafing spots. As many as 33 birds were counted in a single day (Table 1).

During the winter, a female was seen on December 12, a pair on December 17, and a female on March 8, all on one of the Arboretum creeks. A pair was seen on the spring creek that drains the Nevin Fish Hatchery ponds, three miles south of the Arboretum ponds, on December 30 and on February 6.

The first Wood Ducks (eight) were seen back on Lake Wingra on April 1, 1945, and were then seen regularly until May 1. Although 25 nest boxes, built according to a special design sent us by the Illinois Natural History Survey, had been set out, none was used, perhaps because we did not put sawdust in the boxes until May 14. Wood Duck boxes were set out because (1) during the CWA days most of the dead trees were cleaned out of the Arboretum woodlots, thereby eliminating most of the potential nesting cavities; and (2) it would be easier to capture nesting females in boxes to determine whether or not they were birds of the release.

On May 21, a nest was found in the Lake Forest residential section adjoining the Arboretum. The nest tree, in a yard adjacent to a house, was a dead white oak with only two large forks remaining, in one of which was a cavity that the Wood Ducks were using as a nest. The male of the pair was seen only once, and then in flight, but the female was from the blue release of 1944. This was the first breeding Wood Duck recorded at Lake Wingra in 50 years. The female incubated at least three weeks, but the ultimate fate of the nest was not determined.

On May 22 a second nest was found, at the Forest Hill cemetery midway between Lake Wingra and Lake Mendota (about a mile from

TABLE 1
COUNTS OF WOOD DUCKS, FALL, 1944

Date	August						September					October				November	
	19	21	22	25	27	30	5	8	12	15	21	4	6	20	31	1	3
Pond 1	6	7	19	29	13	27	22	9	26	18	10	6	7	11	6	9	0
Pond 2	3	12	0	2	0	0	—	—	0	0	0	0	0	—	—	—	0
Lake Wingra	19	4	0	0	0	0	—	—	1	0	0	—	—	—	—	—	0
Spring Creeks	—	—	—	—	—	6	—	—	2	0	—	—	—	—	—	—	—

(—) indicates that the location was not visited on the date in question.

each). The cavity, about 15 feet from the ground and opening to the north, was in a large live soft maple. Since its floor was only an inch below the opening, the incubating bird could be seen from the ground. The female proved to be one of the red release. I opened one egg, which showed that the clutch had been incubated about 11 days, and the nest was kept under observation. When the eggs hatched, on June 12, there was water in the nest from a heavy rain, and I removed the adult and the 10 ducklings to a holding pen in the Arboretum. One duckling escaped and died during the night. The adult and the other 9 ducklings were released on Pond 2, June 13.

It is interesting (though perhaps a mere coincidence) that the duck found nesting south of Lake Wingra had been released on the south side of the lake (blue release), and the bird found nesting to the west had been released on that side of the lake (red release).

During the summer, three broods, which were thought not to be from either of the nests described above, were seen; the total of nesting pairs, therefore, was probably five. Only one male duck was seen during the nesting season.

On December 30, 1945, a flock of six or eight Wood Ducks was seen on one of the Arboretum creeks; on January 31, a male of this flock was trapped and proved to belong to the blue release; the same bird was retrapped two weeks later at the Nevin Fish Hatchery, where Wood Ducks had been seen the first winter after the releases.

In the spring of 1946, the first Wood Ducks were seen on Lake Wingra on April 6. During the next month, many flocks and pairs were seen on all parts of the lake shore and in the Arboretum creeks and ponds. On April 11, 20 new nest boxes were set out and the old boxes reopened. A week later, four boxes contained breast feathers of female Wood Ducks, but none of the boxes was actually used for nesting that season. The nest cavity in the dead white oak used the previous year was used again, but a wind storm broke the snag, and the bird deserted. Two pairs of Wood Ducks were seen almost daily on the Arboretum ponds until about July 10, but no broods were seen in the vicinity.

Two Wood Duck broods (probably young of our released birds) were seen during the summer of 1946 on University Bay, of Lake Mendota, about two and a half miles from the original release site. Nesting Wood Ducks had been absent from this bay for as long as they had from Lake Wingra. One of the broods (12 to 14 ducklings) stayed about three weeks; the other brood (11 ducklings) dwindled to 5, which presumably flew south.

None of the birds released at Lake Wingra was found in Havana, Illinois, 200 miles away, where they had hatched and had their first three to six weeks of rearing. The area surrounding the hatching place is a thoroughly studied Wood Duck nesting area, and any ducks

that returned there would have undoubtedly been found in the nest boxes of the colony, which were periodically checked. Thus it appears that the point to which a duck returns is the place from which it leaves in autumn—the place where it learns to fly. With our ducks it was a matter of two to two and a half months between the start of learning to fly and the departure for the south. There remains to be determined the minimum time required at a release point for the birds to fix the locality in their "minds" so that they will return there the following spring.

A similar experiment was performed in Finland by Villkangas (1933). Here Mallard (*Anas platyrhynchos*) eggs from Britain were hatched and the young subsequently banded and released. All victory and breeding recoveries were en route to or in Finland.

In 1944, 95 young Wood Ducks were sent from the Illinois Natural History Survey to Indiana, where they were released by O. D. McKeever in the Jasper-Pulaski State Game Preserve (near Wallace Lake, 180 miles from the place of hatching), where there was already a small colony of Wood Ducks established. Of 15 nests on the area the following spring, 4 (and perhaps 5) belonged to females from the experimental release (*Pittman-Robertson Quarterly*, Oct. 1945). (The eggs for both the Indiana and the Wisconsin experiments were collected from clutches laid by wild Wood Ducks at Havana, Illinois.)

As a game management practice, the transplanting procedures here described appear to be an effective means of establishing a Wood Duck colony in areas now devoid of breeders. Transferring Wood Duck eggs into nests of locally nesting semi-wild Mallards is in my opinion another method of starting a colony, despite the fact that the eggs we shipped by rail from Illinois for this purpose were damaged en route in two consecutive years, 1943 and 1944. Shipping by air or automobile might eliminate such damage.

SUMMARY

In August 1944, 97 young Wood Ducks, hatched and partially reared in Illinois, were raised to about seven weeks of age and released at Madison, Wisconsin, 200 miles from the hatching site.

A few wintered in the area of the release.

Ducks of both sexes from the release returned to Madison to breed, both in 1945 and 1946.

None of the ducks of the release was found in the area of hatching.

A similar release of young Wood Ducks, hatched in Illinois, was made in 1944 in Indiana. At least four females returned to Indiana to breed.

ACKNOWLEDGEMENTS

Grateful appreciation is expressed to the Illinois Natural History Survey, especially to Frank Bellrose, Arthur Hawkins, and Harold Hanson, for allowing us to participate in the homing experiment and for furnishing the ducklings; to Mrs. Arthur Kochler, Mrs. A. F. Gallistel and Mr. D. W. Pahl of Madison for calling my attention to Wood Duck nests or broods; to Arnold Jackson, Jr., and Allen W. Stokes, research assistants who helped in all phases of the project; to Professor Aldo Leopold, research director, for guidance and for checking the manuscript.

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